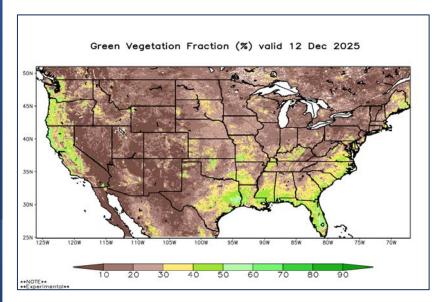
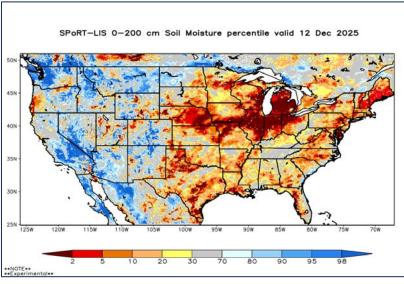
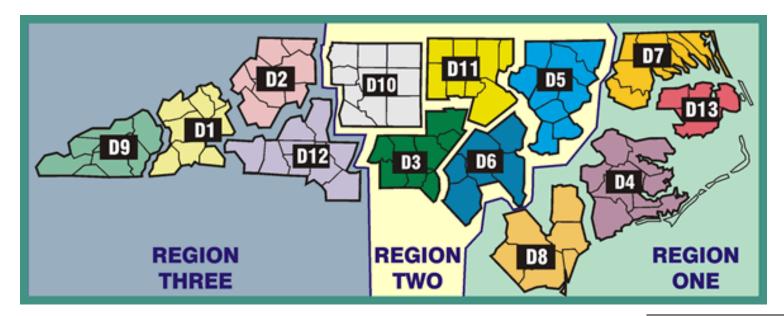
# December - 2025

# Monthly Fire Danger Assessment NCFS – All Regions







# **Statewide Wildfire Context**

January: 10-yr avg is 309 fires for 530 acres
February: 10-yr avg is 618 fires for 1,598 acres
March: 10-yr avg is 891 fires for 4,784 acres
April: 10-yr avg is 629 fires for 6,546 acres
May: 10-yr avg is 293 fires for 1,161 acres
June: 10-yr avg is 243 fires for 2,424 acres
July: 10-yr avg is 193 fires for 645 acres
August: 10-yr avg is 138 fires for 395 acres
September: 10-yr avg is 173 fires for 377 acres
October: 10-yr avg is 236 fires for 1,962 acres
November: 10-yr avg is 462 fires for 6,035 acres
\*December: 10-yr avg is 305 fires for 580 acres

\_\_\_\_\_

October: 402 incidents for 450 acres November: 921 incidents for 2,353 acres MTD Activity: 66 incidents for 34.3 acres

\*All wildfire activity data is preliminary\*

Does not include additional federal wildfires/acres

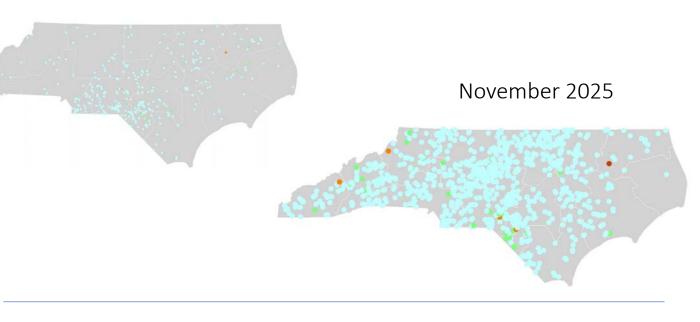
2015-2024 CY Average

\*\*Largest incidents by discovery date, MTD December:

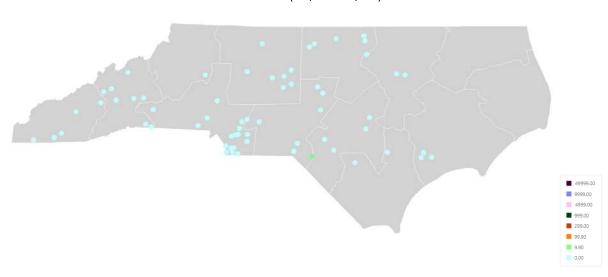
\*from fiResponse & preliminary reporting only\*

| Incident Name               | Discovery Date 💌 | Region   | ~ | District    | ¥ | County                 | ¥ | Acres | <b>↓</b> ↓ |
|-----------------------------|------------------|----------|---|-------------|---|------------------------|---|-------|------------|
| Airbase Rd                  | 12/1/2025        | Region 2 |   | District 3  |   | <b>Scotland County</b> |   |       | 10.00      |
| Turnip                      | 12/3/2025        | Region 2 |   | District 11 |   | Caswell County         |   |       | 4.00       |
| Field                       | 12/11/2025       | Region 2 |   | District 6  |   | Hoke County            |   |       | 2.55       |
| Malloy mattress             | 12/1/2025        | Region 2 |   | District 3  |   | Richmond County        | y |       | 2.00       |
| Filter Plan                 | 12/10/2025       | Region 3 |   | District 9  |   | Haywood County         | , |       | 2.00       |
| Bladen County - Ruskin Road | 12/1/2025        | Region 1 |   | District 8  |   | Bladen County          |   |       | 1.00       |
| Rushing Rd.                 | 12/1/2025        | Region 3 |   | District 12 |   | Union County           |   |       | 1.00       |
| Tyson Rd                    | 12/1/2025        | Region 2 |   | District 3  |   | Stanly County          |   |       | 1.00       |
| Treyburn Drive              | 12/11/2025       | Region 3 |   | District 12 |   | Cabarrus County        |   |       | 1.00       |
| Burch Again                 | 12/9/2025        | Region 2 |   | District 6  |   | Johnston County        |   |       | 1.00       |
| Foxtrot Ln Fire             | 12/10/2025       | Region 2 |   | District 10 |   | Davie County           |   |       | 1.00       |
| NW Bridge Fire              | 12/11/2025       | Region 1 |   | District 4  |   | Onslow County          |   |       | 0.75       |



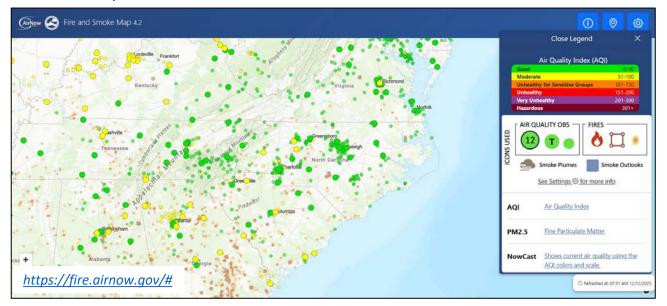


# MTD (12/1 – 12/11)



\*\*Note: DOD & other entirely federal ownership wildfires not shown on fiResponse

# Air Quality Notes



200

150

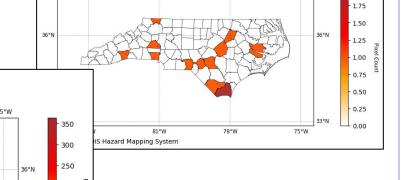
100

Fire & Smoke Map heat detects from VIIRS (above). RX Burning evident in the Southeast. NC Map showing YTD and past week satellite detects from same source. Note that cloud cover and other factors can limit detections. Hazard Mapping System link below, center.

Year to Date Activity 2025-12-10

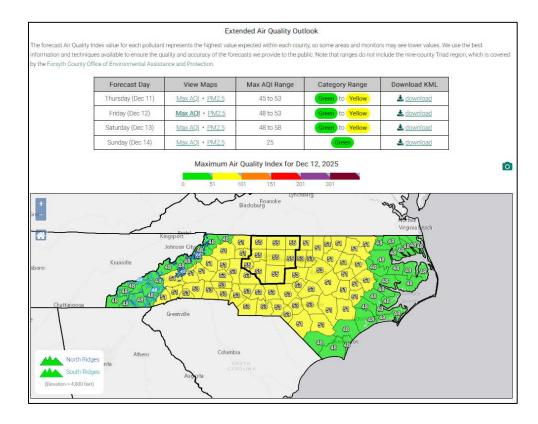
36°N

NOAA/NESDIS Hazard Mapping System



Weekly Fire Activity 2025-12-10

https://www.ospo.noaa.gov/products/ land/hms.html#maps



This forecast was issued on Thursday, December 11, 2025 at 3:07 pm. This forecast is currently valid.

#### Today's Air Quality Conditions

Current daily average fine particulate concentrations are in the Code Green range statewide.

For a display of the most recent Air Quality Index (AQI) conditions throughout the day, visit the Ambient Information Reporter (AIR) tool.

#### General Forecast Discussion

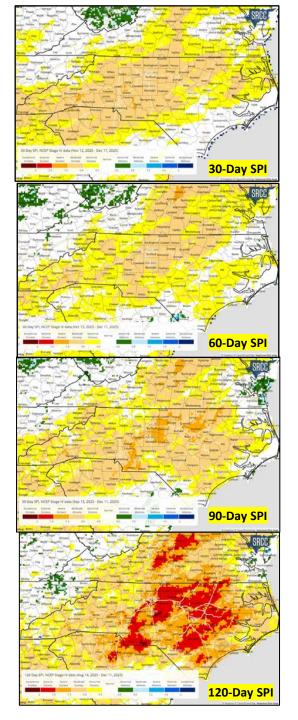
Generally quiet weather and a broad pressure gradient overhead on Friday and Saturday will lead to light, circulating winds in the region. With overnight lows near or just below freezing, the potential for an uptick in residential wood burning paired with strong overnight temperature inversions means that fine particulates will likely accumulate well into the moderate Code Yellow range. Pollution will only slowly disperse during the day. Expect widespread Code Yellow daily averages to persist on both days.

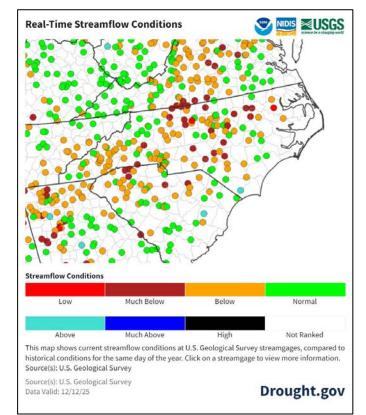
#### Outlook

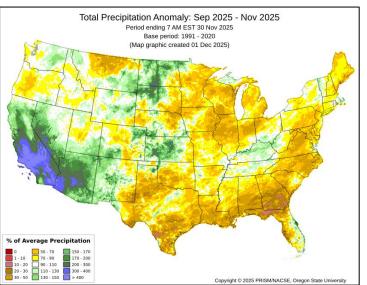
2.00

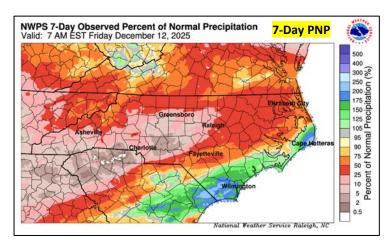
On Sunday morning, an extremely cold, dry Arctic front will drive through from the northwest and clear the state by early afternoon. Strong northwesterly winds behind the front will deliver a clean, chilly airmass to the region. Fine particulates will lower into the Code Green range statewide.

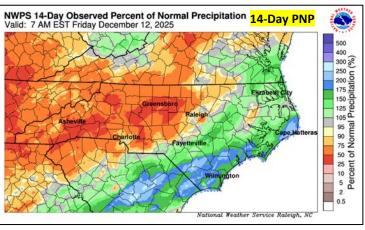
Author: Sara Kreuser (sara.kreuser@deq.nc.gov) - NC Division of Air Quality

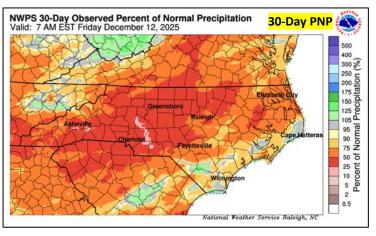


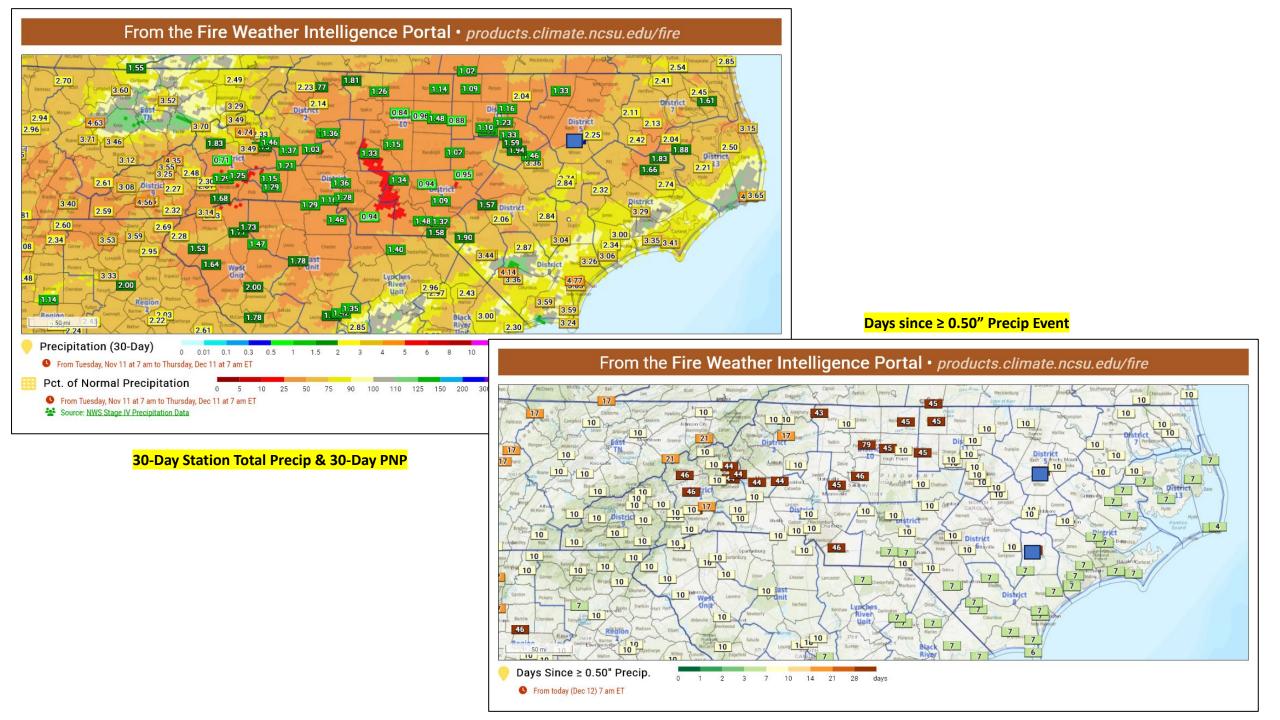




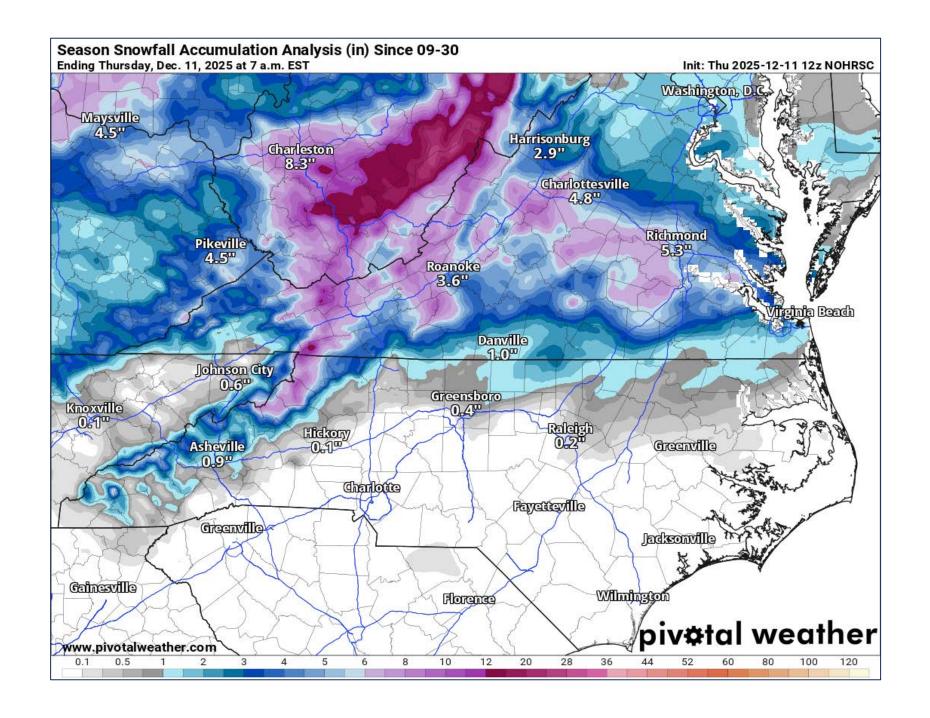






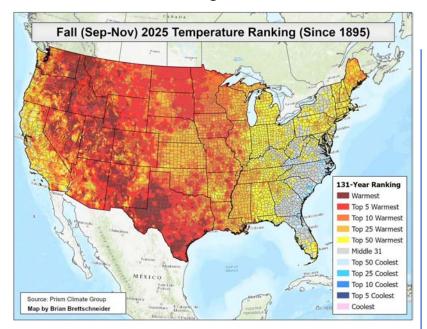


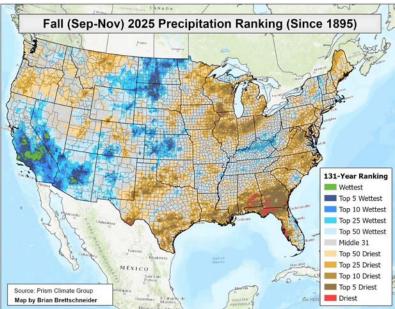
Season Total Snowfall Accumulation



# Fall 2025 Temp & Precip

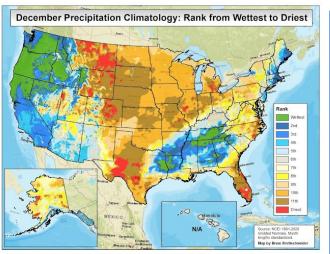
Ranking since 1895

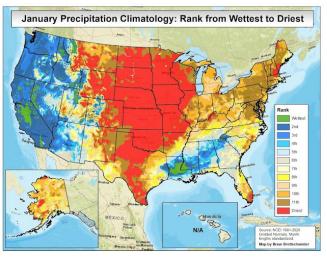




# Rainfall Rankings by Month

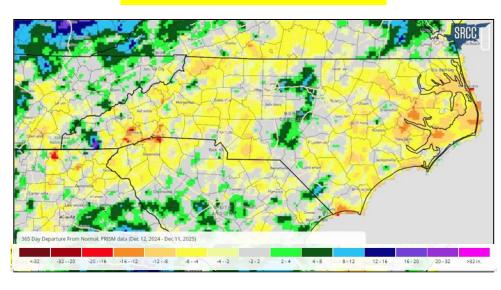
1991-2020 Climatology)

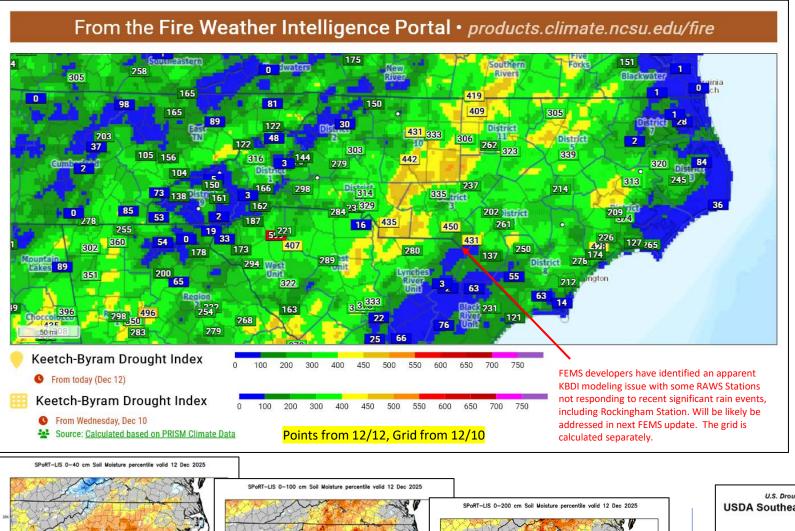




https://us-climate.blogspot.com/2021/06/wettestmonths-of-year-1991-2020.html

## 1-Yr Departure from Normal (in.)



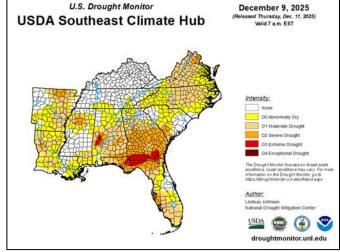


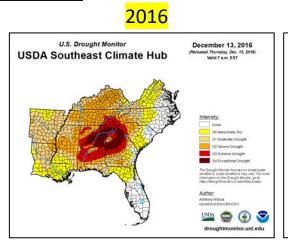
0-100 cm

0-200 cm

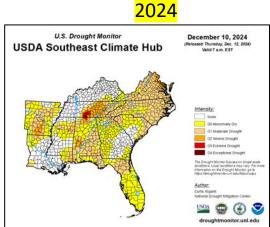
<mark>0-40 cm</mark>

- KBDIs have decreased in many areas over the past month, however pockets of much drier conditions remain. Reminders that KBDI daily increases are based upon maximum daily temperature.
- Intense surface fire can still occur even with low KBDI values in the dormant season.
- Note modeled 0-200 cm soil moisture percentile, representing the ~0-6 ft. soil profile across the landscape (bottom center).
- USDM Map comparison 2016, 2024, 2025.



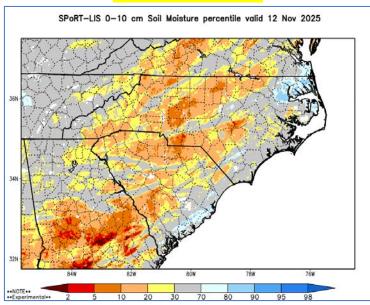


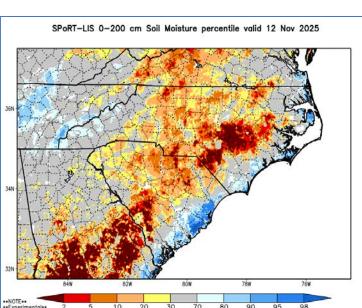
Current



# SPoRT Modeled Soil Moisture Percentiles for ~4" and ~72" profile.

#### 11/12/25



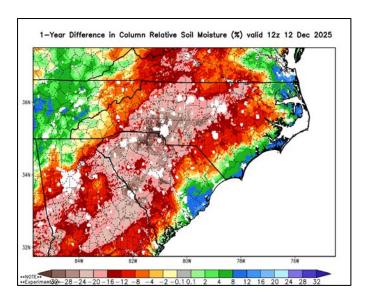


~ 30-days ago Left, today on Right. Just a model.

Soil dryness expanding in depth and spatial extent. Slower than growing season, but still occurring.

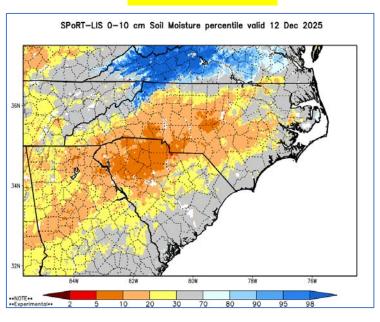
Models are picking up on significant dryness for much of the state.

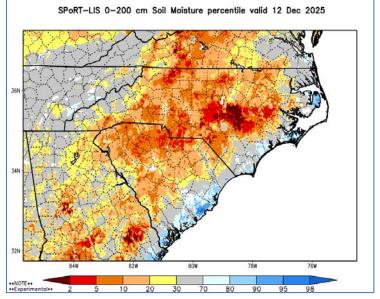
Note 1-year difference graphic below.

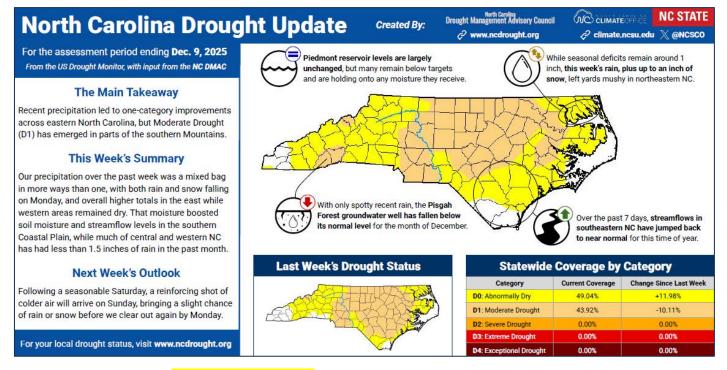


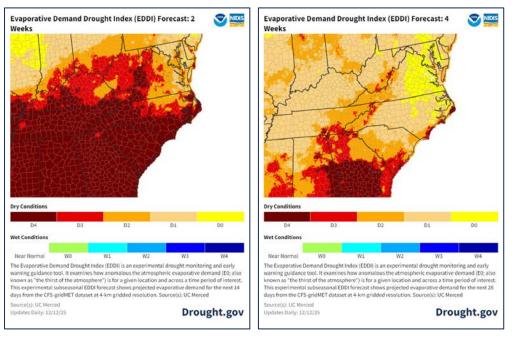
https://weather.ndc.nasa.gov/sp ort/case\_studies/lis\_NC.html

# 12/12/25







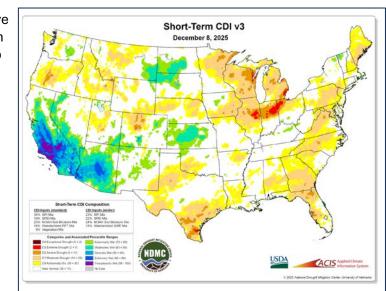


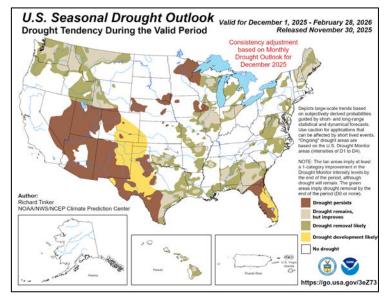
# **EDDI & Drought**

**EDDI Maps** - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week avg level. They are trending much drier than normal for NC in the 2-week time scale. Warmth, lack of precip and dry air accelerates this index.

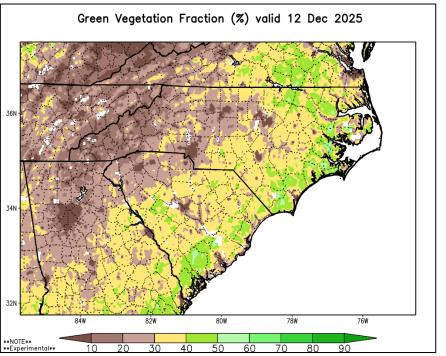
**US Drought Monitor –** Most recent USDM map release above (12/9). Model spread is significant with La Nina related pattern impacting the SE. Rapid drought intensification is possible as we move into the growing season, should rainfall deficits remain significant.

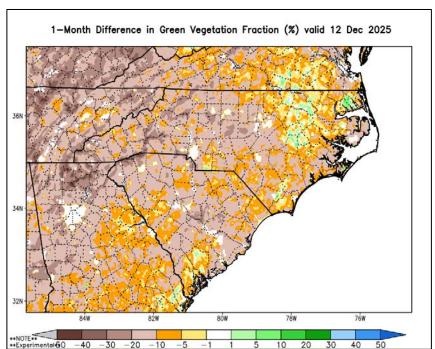
Short-Term Composite Drought Indicator Map & Seasonal Drought Outlook - shown at right. See detailed state/regional discussions here. Conditions are favoring persisting dryness in current areas of drought and expanding overall dryness as we move through winter. All of this is dependent upon any future storm tracks and seasonal variability we see moving through Winter.

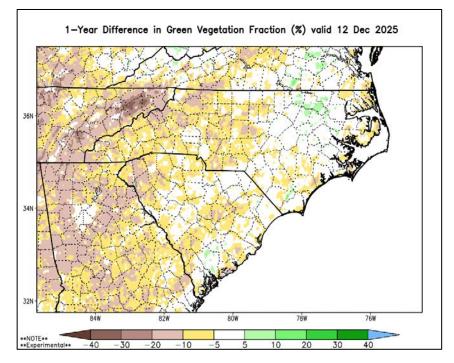




SPoRT Modeled Green Vegetation Fraction







# State Climate Office: Short-Range Monthly Outlook for NC

Released **12/4/25** 

Location: https://climate.ncsu.edu/fire/outlooks/

# **Short-Range Outlook for North Carolina**

# Week 1:

December 4 to 10, 2025



#### Week 2:

December 11 to 17, 2025



# Weeks 3-4:

December 18 to 31, 2025





As a series of Canadian high pressure systems nose

southward, cooler temperatures will be locked in this

week, with highs mostly in the 40s. Friday will be the

coldest with temperatures stuck in the 30s thanks to

a chilly air mass plus cloud cover and precipitation.

Low pressure to our south will pump in moisture to

support precipitation on Friday and Saturday, Areas

in the north and west could see light snow to start

but lower liquid totals of a half-inch or less, while the

south and east will see upwards of 2 inches of rain.



#### From Cold to Warm

Cold again late next week...



Dry under high

pressure



Early this week, we're in for another quick cooldown as the next Arctic air mass funnels in across our region. As that high pressure system shifts to just off our coastline, the southerly circulation behind it will bring in much warmer air to start the work week.

...with a quick warm-up after

#### Mostly Dry This Week

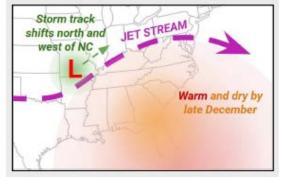


With dome-like high pressure overhead for so much of the week, any precipitation chances will be very limited. Expect a stretch of drier days, potentially ending late in the week once high pressure pushes off the coast and any Gulf moisture moves back in.

#### **Forecast Confidence**



High confidence in dry weather is offset by the usual questions about the timing and intensity of a big temperature swing like this.



#### Warmer to End 2025



By later this month, the jet stream should shift to our north in a classic La Niña-like setup, which would put us in a warmer weather pattern through the end of the year. Our normal high temperatures in late December range from the upper 40s to lower 50s.

#### Likely Staying Dry



A northward shift in the storm track should keep us mostly dry through the final two weeks of the month. One wildcard is the Madden-Julian Oscillation, which could favor more moisture availability across our region through at least the beginning of Week 3.

#### **Forecast Confidence**



Recent models have come into better agreement about our late-month pattern featuring warmer and drier weather typical of La Niña.

# **Forecast Confidence**



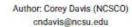
A Chilly Week Ahead

Wet Friday and Saturday

This forecast has multiple uncertainties, from how widespread snow and ice will be on Friday to lingering rain chances until Monday.

This infographic is based on forecast and outlook guidance from the National Weather Service. For more information, visit www.weather.gov







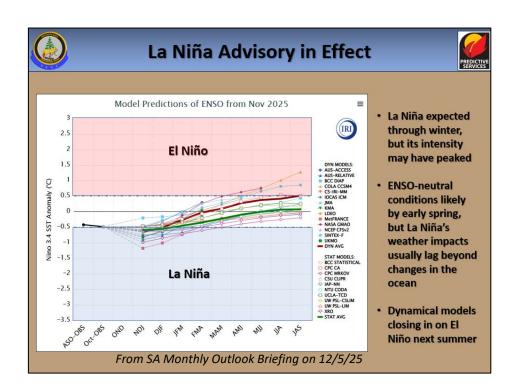


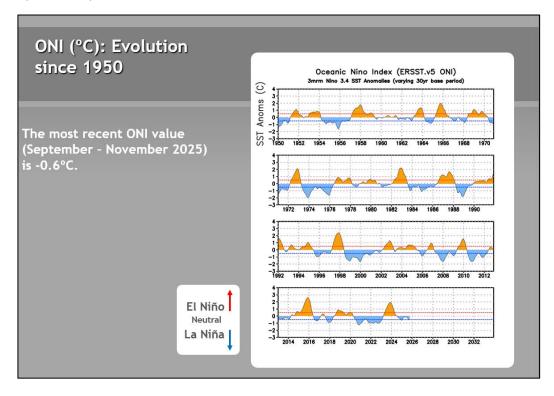
# ENSO Notes from the CPC (12/11/25 Update)

#### ENSO Alert System Status: La Niña Advisory

La Niña is favored to continue for the next month or two, with a transition to ENSO-neutral most likely in January-March 2026 (68% chance).

ENSO, or El Nino Southern Oscillation, is a fluctuation in the sea surface temperature (SST) in the equatorial Pacific Ocean. Research has shown that even slight changes in the SST, particularly in area 3.4, can influence weather in North America. Generally, when SSTs are lower than normal, known as La Nina, NC has drier than normal conditions and can have more fire occurrence. However, La Nina also can lead to more tropical activity. El Nino, on the other hand, usually means wetter weather for NC, but less opportunity for tropical landfalls due to increased wind shear. In order to declare a La Nina, the departure from average SST must be at least -0.5° C (line shown in green) for 3 consecutive months. For El Nino, the departure must be at least 0.5° C above average for 3 consecutive months.





From the most recent CPC Diagnostic Discussion (ENSO Diagnostics Discussion):

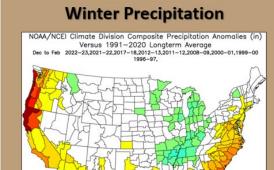
The IRI multi-model predictions indicate La Niña will continue in the December-February (DJF) 2025-26 season, but then ENSO-neutral is favored for January-March (JFM) 2026 [Fig. 6]. Together with the North American Multi-Model Ensemble, the team continues to slightly support a weak La Niña through DJF (54% chance), before transitioning to ENSO-neutral in JFM. Even after equatorial Pacific SSTs transition to ENSO-neutral, La Niña may still have some lingering influence through the early Northern Hemisphere spring 2026 (e.g., CPC's seasonal outlooks). In summary, La Niña is favored to continue for the next month or two, with a transition to ENSO-neutral most likely in January-March 2026 (68% chance; [Fig. 7]).

Slide Source: https://www.cpc.ncep.noaa.gov/products/analysis monitoring/lanina/enso evolution-status-fcsts-web.ppt

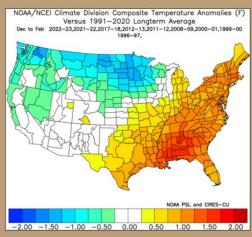


# **Potential Analogs This Year**



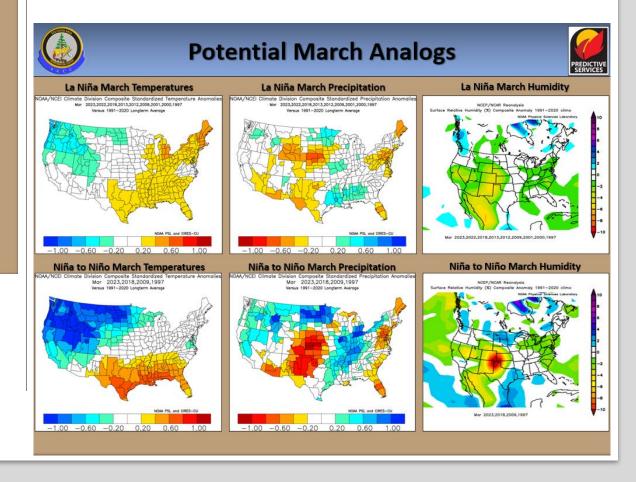


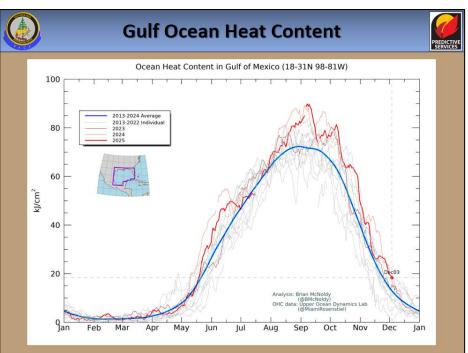
# Winter Temperatures



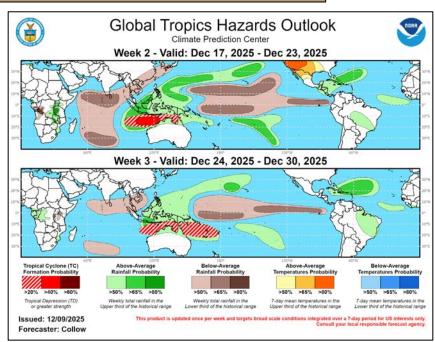
From SA Monthly Outlook Briefing on 12/5/25

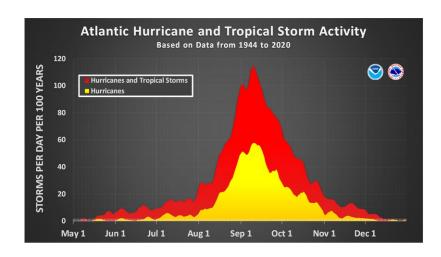
NOAA PSL and CIRES-CU

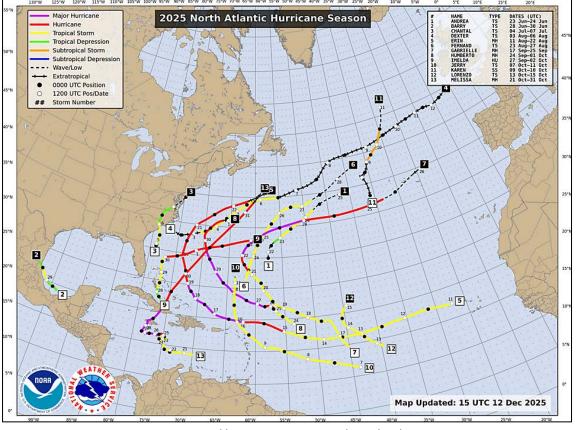




# Tropical Related

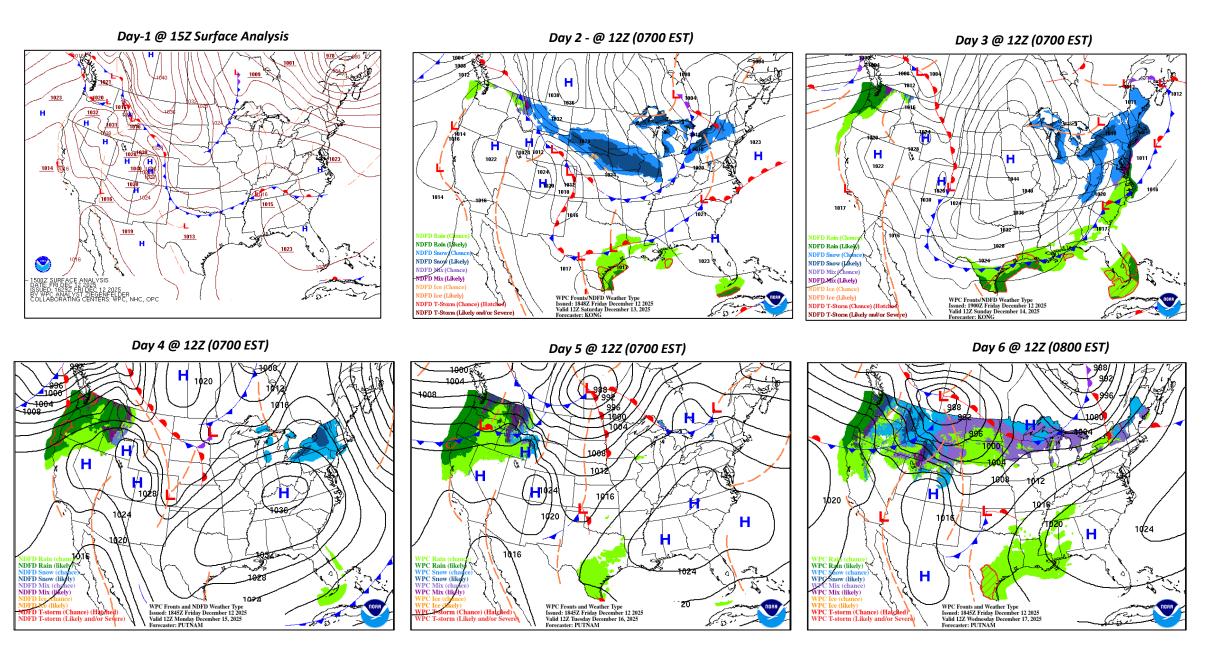




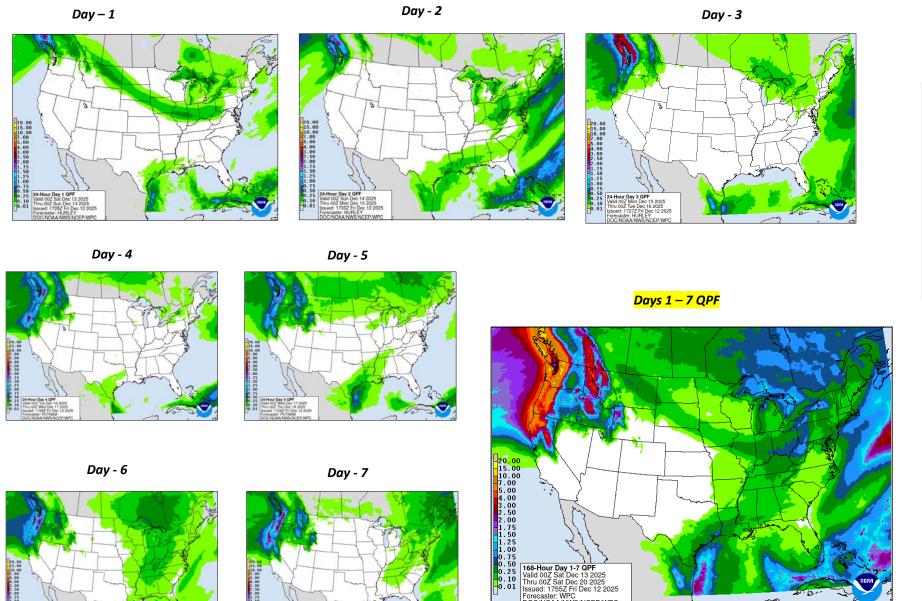


https://www.nhc.noaa.gov/data/tcr/?tex

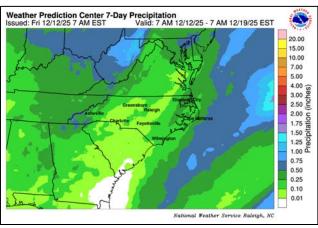
# WPC Forecasted Surface Fronts & Sea-Level Pressures

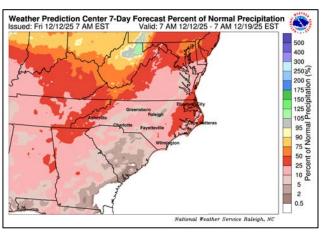


# Quantitative Precipitation Forecast, 7-Day



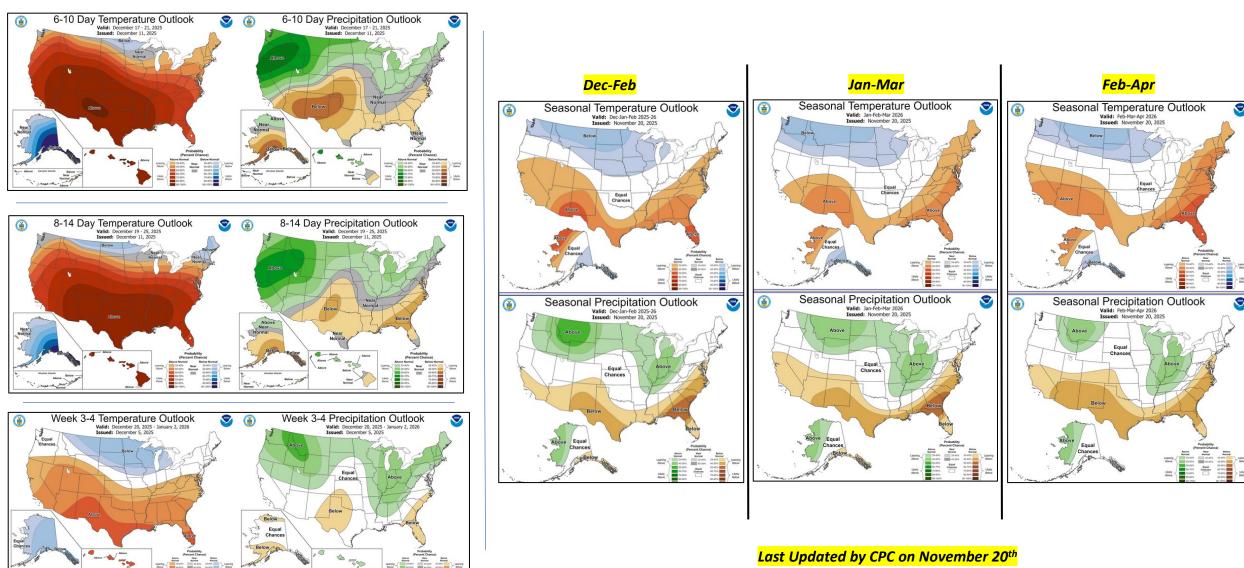
#### Zoom - Days 1 – 7 QPF





# Temp & Precip Outlook

6-10 Day, 8-14 Day, Weeks 3-4, Seasonal (D/J/F, J/F/M, F/M/A)

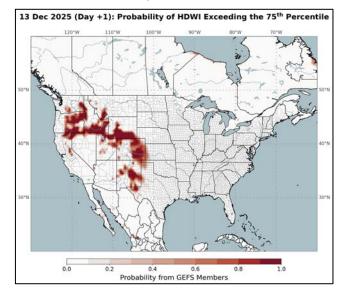


https://www.cpc.ncep.noaa.gov/products/predictions/long range/fxus05.html

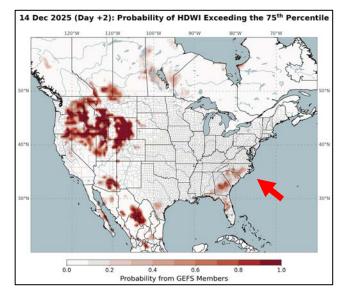
Source: https://www.cpc.ncep.noaa.gov/

# Hot-Dry-Windy Index (HDW)

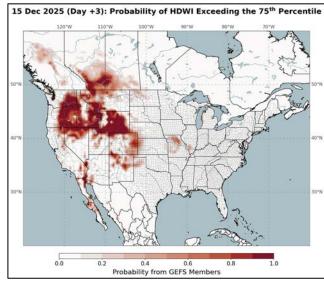
#### Saturday > 75<sup>th</sup> Percentile



Sunday > 75<sup>th</sup> Percentile

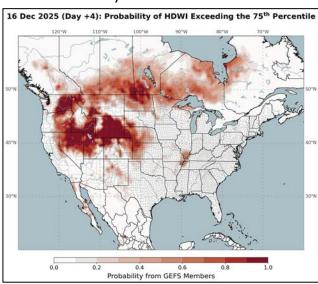


Monday > 75<sup>th</sup> Percentile

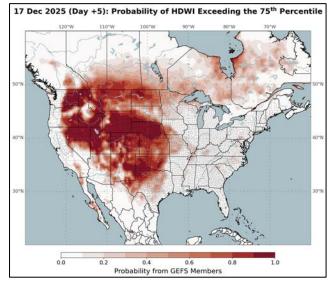


- Another visualization tool to pick up on broader weather, but with \*limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution 0.5 Degree Grid
- No Account of Local Fuel **Conditions and Topo**

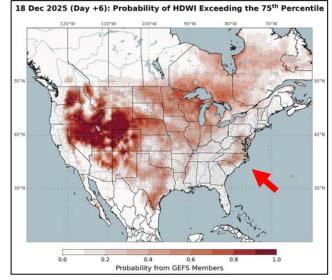
Tuesday > 75<sup>th</sup> Percentile



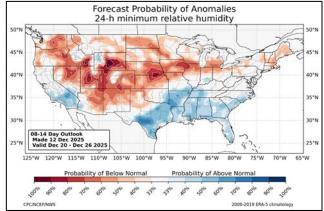
Wednesday > 75<sup>th</sup> Percentile

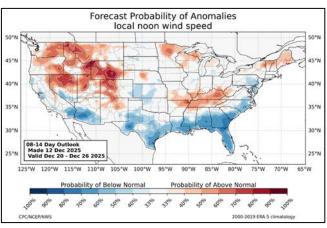


Thursday > 75<sup>th</sup> Percentile

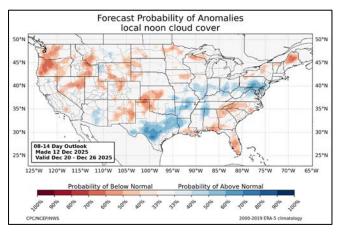


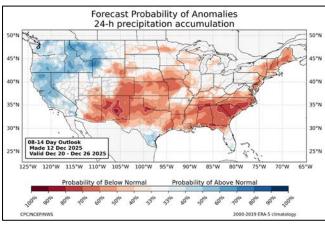
# Forecast Probability of Anomalies 24-h maximum temperature 50\*N 45\*N 45\*N 40\*N 35\*N 30\*N 25\*N 125\*W 120\*W 115\*W 110\*W 105\*W 100\*W 95\*W 90\*W 85\*W 80\*W 75\*W 70\*W 65\*W Probability of Below Normal Probability of Above Normal Probability of Above Normal





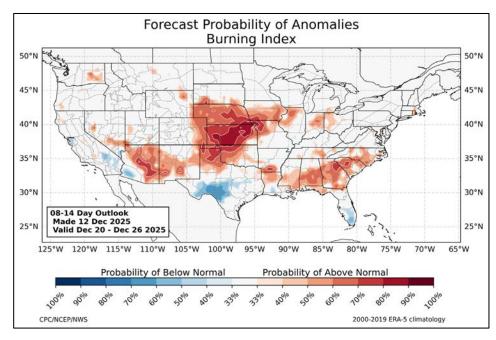
# Week Two Forecast Anomalies: 12/20 - 12/26

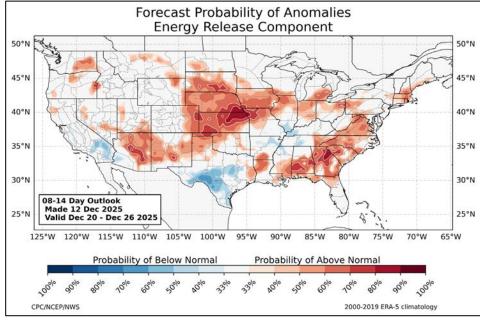




Important to note that there is significant forecast uncertainty as you go further out in time.

Warming and overall drying trend represented.

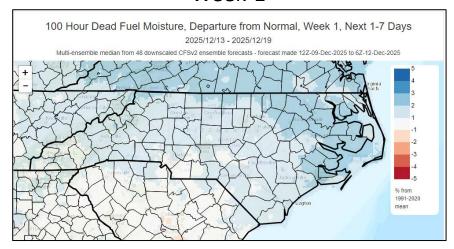




# Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

#### Week-1



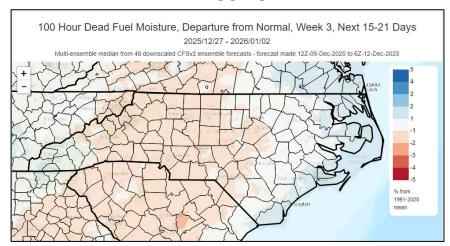
This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration, wind and overnight RH recovery trends.

# Note that <u>modeled</u> impacts of warmer/drier conditions (lower % mc or "worse") is focused most intensely on

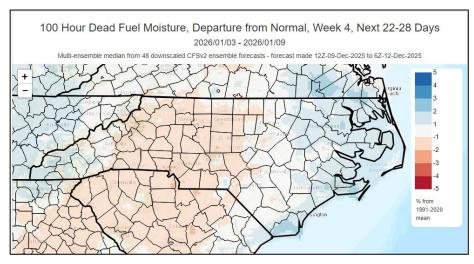
Week 2 in the Mtns/West Piedmont.

Important to note that there is significant forecast uncertainty as you go further out in time, especially relating to any potential storm tracks.

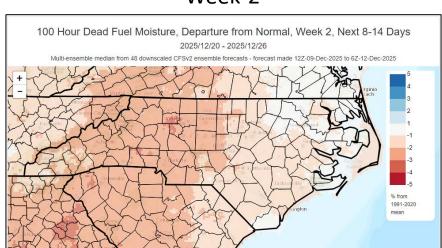
Week-3



## Week-4



# Week-2



# SACC Daily Outlook, Selected Snips from Friday – 12/12

https://gacc.nifc.gov/sacc/resources/predictive/sacc-daily-outlook.pdf



# **SACC Daily Outlook**

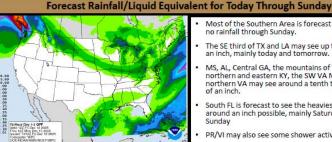
Friday, December 12, 2025



#### National Gridded Snowfall Analysis during 24h preceding 2025 December 12, 0:00 UTC Most of the Southern Area has not reported snowfall over the 24 hour period 7pm last night, Eastern Standard Time. · Scattered areas of 1 to 4 inches were reported in the mountains of eastern KY, VA,

#### reported in western KY, and the higher elevations of TN, NE AL, and North GA.

Isolated areas of lighter accumulations were



- Most of the Southern Area is forecast to see little to no rainfall through Sunday.
- The SE third of TX and LA may see up to a quarter of an inch, mainly today and tomorrow.
- MS, AL, Central GA, the mountains of TN and NC. northern and eastern KY, the SW VA Mts. and northern VA may see around a tenth to two tenths
- South FL is forecast to see the heaviest rain, with around an inch possible, mainly Saturday and
- PR/VI may also see some shower activity.

# Potential for Severe Thunderstorms This Weekend

- The Storm Prediction Center is not forecasting any potential of organized severe weather.
- Sunday may see some thunderstorm activity in South FL.

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.



# **SACC Daily Outlook**

Friday, December 12, 2025



# Probability of Greater that 4 Inches of Snow Today Through Saturday Morning



- Snowfall is not forecast to be over 4 inches for almost the entire area this weekend.
- The exception os for today through tonight in the mountains of SW VA, where there is up to a 40% probability.

#### Observed/Forecast ERC Y's



- The ERC-Y's are reporting in below the 60th percentile across almost the entire Southern Area.
- The exception is Central and West TX, where the ERC-Ys are reporting between the 64th and 68th
- The model forecast show a downward or stagnant trend across the Southern Area.

#### 10 Hour Dead Fuel Moisture with 0-40cm Soil Moisture Percentiles(Shaded)



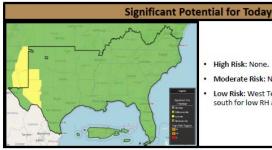
- Most of the Southern Area is reporting 10-hr Fuel moistures below 16%.
- The exceptions are South TX and South FL, where moistures are between 20% and 25%.
- Central and West, as well as the TX/OK Panhandles are reporting FM as low as 7%.
- The soil moistures down to 40 cm have shown improvement, although there are still large areas of soil moistures below 10%, mostly west of the MS River, MS, Central and North AL, Central GA, western SC, western NC, northern VA, and areas in

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.

# **SACC Daily Outlook**

Friday, December 12, 2025





- High Risk: None.
- Moderate Risk: None.
- Low Risk: West Texas and the Texas Panhandle south for low RH and dry fuels.

# Significant Fire Potential for Tomorrow

- High Risk: None.
- Moderate Risk: None.
- Low Risk: The TX/OK Panhandles, NW TX, And West Texas, and the Trans-Pecos in Texas for low RH and dry fuels.

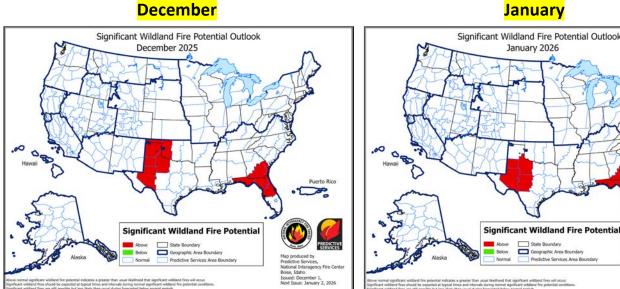
#### Significant Fire Potential for Sunday



- High Risk: None.
- Moderate Risk: None.
- Low Risk: South AL, Central and South GA, Central SC, the SC coastal plain, and NW FL for low RH and dry fuels.

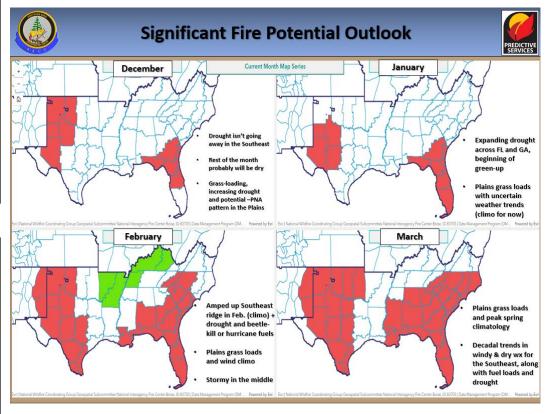
National 7-Day Significant Fire Potential Outlook

# Significant Wildland Fire Potential Outlook: Updated 12/1/25





# **February March** Significant Wildland Fire Potential Outlook Significant Wildland Fire Potential Outlook February 2026 March 2026 Significant Wildland Fire Potential Significant Wildland Fire Potential State Boundary State Boundary Below Geographic Area Boundary Below Geographic Area Boundary Map produced by Predictive Services, National Interagency Fire Center Map produced by Predictive Services, National Interagency Fire Center Predictive Services Area Boundar Predictive Services Area Boundar



From SA Monthly Outlook Briefing on 12/5/25

<sup>\*</sup>A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have consistently seen from year to year.

# Southern Area – Fall 2025 Wildfire Risk Assessment

#### Southern Area Wildfire Risk Assessment Fall 2025

Southern Area Decision Support Group

Issued: October 14, 2025





1

Please review the newly released SA Wildfire Risk Assessment for Fall 2025 – it discusses overall regional concerns as well as fire effective weather patterns.

Take special note of "Appendix A – Critical Fire Weather and Environmental Conditions" starting on page 58.

# Southern Area – Mountain Wave Wind Event Note

# MOUNTAIN WAVE WIND EVENTS

Mountain waves occur amid stable air masses with strong temperature inversions near mountainous terrain and are most common through late fall and winter in the Appalachians. They may occur near any elevated terrain in the geographic area, as long as the **wind direction** 

#### Indicators and Watchouts:

- Roll clouds aligned with ridgeline topography
- National Weather Service high wind warnings associated with pre-frontal (southeast) or post-frontal (northwest) winds
- Highly localized
- Not possible to forecast due to model and data limitations
- Higher winds often accompanied by much drier air mass
- Expect erratic fire behavior and rapid fire growth

Although their footprint is often quite narrow, extreme winds in excess of hurricane-force (80 -100 mph) can occur on the lee or downwind side of ridges, with a rapid and unexpected shift in wind direction also a distinct possibility. Humid and cool conditions may be suddenly interrupted as drier air aloft accelerates towards the ground, resulting in extreme winds and a sudden decrease in relative humidity. Areas downwind of steep gradients in terrain are most susceptible. The east side of the Appalachians can see mountain wave events that lead to enhanced winds and subsidence in post-frontal environments as well. In addition to enhancing fire weather and potentially leading to extreme fire behavior, mountain waves can contribute to new ignitions from downed power lines and restrict air ops due to potential IFR. conditions and severe to extreme turbulence

aloft lies within 30 degrees of being perpendicular to a ridge line. The southern Appalachians traditionally experience them in pre-frontal environments, often at night, as warm and moist Atlantic or Gulf air surges northwards or northwestwards ahead of an approaching low pressure system and its cold front. The most common weather pattern associated with them features a strong low pressure system moving through the Ohio Valley or Great Lakes.



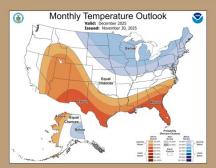
#### CHIMNEY TOPS 2 FIRE

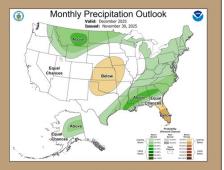
- Date: November 28, 2016
- · Location: GSMNP, Sevier County, TN
- · Persistent severe drought conditions
- 87 mph wind gusts due to Mountain Wave Wind Event recorded
- Fire growth from 35 acres to 17,000 acres in 24 hours
- 14 deaths
- 2,501 structures impacted



## **December Outlook**







- Precipitation outlook an overreaction to a forecast from WPC another artifact of NOAA's NBM issues
- Rainfall axis trended much farther south from what models were showing 6-10 days ago
- Perhaps the result of a Sudden Stratospheric Warming event and subsequent negative Arctic Oscillation
- · Resumption of a more typical La Niña storm track expected later in December



## **Next Couple Weeks**



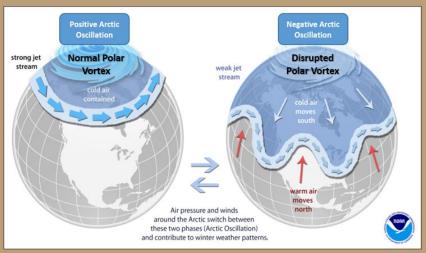
- Dry pattern resumes for most of the region by early next week
  - · Good fire: burn baby burn
- Cold in the East with multiple clipper systems bringing shots of Arctic air; downslope winds on occasion for VA, Carolinas, GA
- Dry cold fronts for coastal areas, with some snow showers possible every few days in the Apps
- Mostly warm and dry in the Plains; warm/dry/breezy tomorrow in West TX; some dry return flow potential next week
- · Pattern change expected in the week leading up to Christmas
- Watching for high wind events in the Plains
- · Severe weather risks may return to central areas, along with rain
- · Warm weather returns to the Southeast

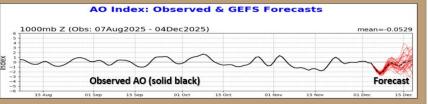


# **Arctic Oscillation**



- Sudden Stratospheric Warming events causing a disrupted polar vortex may be more likely this winter
- Could increase the odds for Arctic air intrusions to the Gulf Coast and East Coast, but precipitation patterns are more dependent on how the AO interacts with other oscillations, including ENSO
- SSWs lead to considerably uncertainty and large swings in the forecast





From SA Monthly
Outlook Briefing on
12/5/25

#### Daily Adjective Rating Outputs for each FDRA (FM-Z) (Observed on Left, Forecast on Right)

| Low Moderate       |              |              |              |                    | High         |               |               | ligh |   | Extreme |   |               |               |
|--------------------|--------------|--------------|--------------|--------------------|--------------|---------------|---------------|------|---|---------|---|---------------|---------------|
|                    |              | ⊞ Cal        | •            | Recent<br>I from h |              | stimates      |               |      |   |         |   |               |               |
| FDRA               | FRI<br>DEC 5 | SAT<br>DEC 6 | SUN<br>DEC 7 | MON<br>DEC 8       | TUE<br>DEC 9 | WED<br>DEC 10 | THU<br>DEC 11 |      |   |         |   | TUE<br>DEC 16 | WED<br>DEC 17 |
| Southern Highlands | L            | L            | L            | L                  | L            | L             | M             | M    | L | L       | M | M             | L             |
| Central Mountains  | L            | L            | М            | L                  | L            | М             | M             | M    | M | L       | M | M             | M             |
| Northern Highlands | L            | L            | М            | L                  | L            | L             | L             | L    | L | L       | L | L             | L             |
| Blue Ridge         | L            | L            | L            | L                  | L            | L             | M             | M    | L | L       | L | L             | L             |
| Western Piedmont   | L            | L            | L            | L                  | L            | L             | M             | M    | M | M       | M | M             | M             |
| Sandhills          | L            | L            | L            | L                  | L            | M             | M             | M    | M | M       | M | M             | M             |
| Eastern Piedmont   | L            | L            | L            | L                  | L            | L             | L             | M    | M | M       | M | M             | M             |
| Southern Coast     | L            | L            | L            | L                  | L            | L             | M             | M    | M | M       | M | M             | M             |
| Northern Coast     | L            | L            | L            | L                  | L            | L             | M             | M    | M | M       | M | M             | M             |

# Hazard Matrix Outputs for each FDRA (FM-Z)

# **Current Statewide Hazard Summary for NC**

| Click on any daily Hazard Level to view the calculation details for that FDRA. |              |              |              |              |              |               |               |                               |               |               |               |               |               |               |  |
|--|--------------|--------------|--------------|--------------|--------------|---------------|---------------|-------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
|  |              | 3            | Recer        | nt Haz       | ard L        | evels         |               |                               |               |               |               |               |               |               |  |
|  |              | Based o      | n the fir    | nal fored    | asts for     | r each da     | te            | Based on the latest forecasts |               |               |               |               |               |               |  |
| FDRA   | FRI<br>DEC 5 | SAT<br>DEC 6 | SUN<br>DEC 7 | MON<br>DEC 8 | TUE<br>DEC 9 | WED<br>DEC 10 | THU<br>DEC 11 | FRI<br>DEC 12                 | SAT<br>DEC 13 | SUN<br>DEC 14 | MON<br>DEC 15 | TUE<br>DEC 16 | WED<br>DEC 17 | THU<br>DEC 18 |  |
| Southern Highlands   | 1            | 1            | 1            | 1            | 1            | 1             | 1             | 2                             | 1             | 1             | 1             | 1             | 1             | N/A           |  |
| Central Mountains  | 1            | 1            | 2            | 1            | 1            | 2             | 2             | 2                             | 2             | 1             | 2             | 2             | 1             | N/A           |  |
| Northern Highlands   | 1            | 1            | <u>2</u>     | 1            | 2            | 1             | 2             | 1                             | 1             | 1             | 1             | 1             | 1             | N/A           |  |
| Blue Ridge   | 1            | 1            | 1            | 1            | 1            | 1             | 1             | 2                             | 1             | 1             | 1             | 1             | 1             | N/A           |  |
| Western Piedmont   | 1            | 1            | 1            | 1            | 1            | 1             | 1             | 2                             | 1             | 2             | 2             | 2             | 2             | N/A           |  |
| Sandhills  | 1            | 1            | 1            | 1            | 1            | 1             | 2             | 2                             | 2             | 2             | 2             | 2             | 2             | N/A           |  |
| Eastern Piedmont   | 1            | 1            | 1            | 1            | 1            | 1             | 1             | 2                             | 2             | 2             | 2             | 2             | 2             | N/A           |  |
| Southern Coast   | 1            | 1            | 1            | 1            | 1            | 1             | 2             | 2                             | <u>2</u>      | <u>2</u>      | 2             | 2             | 2             | N/A           |  |
| Northern Coast   | 1            | 1            | 1            | 1            | 1            | 1             | 1             | 2                             | <u>2</u>      | 1             | <u>2</u>      | <u>2</u>      | 2             | N/A           |  |

The FDRA SIG Averages are applied to generate Percentiles and Color Coding For "All-Days" using new period of record (2010-2024) for SIG stations. Values are based on FEMS processor outputs.

| Fcst. Daily Min. DFM (10-Hr) Pctl. for FDRAs in North Carolina |               |               |               |               |               |               |  |  |  |  |  |  |  |
|--|---------------|---------------|---------------|---------------|---------------|---------------|--|--|--|--|--|--|--|
| FDRA   | Fri<br>Dec 12 | Sat<br>Dec 13 | Sun<br>Dec 14 | Mon<br>Dec 15 | Tue<br>Dec 16 | Wed<br>Dec 17 |  |  |  |  |  |  |  |
| Southern Highlands   | 33.3%         | 46.6%         | 65.8%         | 46.6%         | 33.3%         | 33.3%         |  |  |  |  |  |  |  |
| Central Mountains  | 46.5%         | 56.4%         | 76.5%         | 71.1%         | 65.1%         | 65.1%         |  |  |  |  |  |  |  |
| Northern Highlands   | 77.9%         | 77.9%         | 81.9%         | 77.9%         | 73.4%         | 73.4%         |  |  |  |  |  |  |  |
| Blue Ridge   | 65.1%         | 77.0%         | 81.9%         | 77.0%         | 77.0%         | 77.0%         |  |  |  |  |  |  |  |
| Western Piedmont   | 58.8%         | 58.8%         | 68.2%         | 45.0%         | 30.1%         | 30.1%         |  |  |  |  |  |  |  |
| Sandhills  | 59.1%         | 59.1%         | 75.3%         | 47.5%         | 32.7%         | 32.7%         |  |  |  |  |  |  |  |
| Eastern Piedmont   | 66.6%         | 56.4%         | 66.6%         | 42.5%         | 26.3%         | 26.3%         |  |  |  |  |  |  |  |
| Southern Coast   | 44.5%         | 44.5%         | 73.7%         | 44.5%         | 30.9%         | 30.9%         |  |  |  |  |  |  |  |
| Northern Coast   | 44.5%         | 56.8%         | 66.7%         | 44.5%         | 44.5%         | 44.5%         |  |  |  |  |  |  |  |
| Fcst   | . Daily Min.  | DFM (100      | -Hr) Pctl.    | for FDRAs     | in North C    | arolina       |  |  |  |  |  |  |  |
| FDRA   | Fri<br>Dec 12 | Sat<br>Dec 13 | Sun<br>Dec 14 | Mon<br>Dec 15 | Tue<br>Dec 16 | Wed<br>Dec 17 |  |  |  |  |  |  |  |
| Southern Highlands   | 63.7%         | 50.9%         | 63.7%         | 63.7%         | 50.9%         | 50.9%         |  |  |  |  |  |  |  |
| Central Mountains  | 52.6%         | 38.2%         | 38.2%         | 52.6%         | 52.6%         | 38.2%         |  |  |  |  |  |  |  |
| Northern Highlands   | 68.8%         | 68.8%         | 68.8%         | 68.8%         | 68.8%         | 68.8%         |  |  |  |  |  |  |  |
| Blue Ridge   | 72.5%         | 72.5%         | 72.5%         | 61.5%         | 61.5%         | 61.5%         |  |  |  |  |  |  |  |
| Vestern Piedmont   | 72.3%         | 62.6%         | 62.6%         | 49.2%         | 49.2%         | 34.1%         |  |  |  |  |  |  |  |
| Sandhills  | 60.3%         | 47.8%         | 47.8%         | 47.8%         | 47.8%         | 33.2%         |  |  |  |  |  |  |  |
| Eastern Piedmont   | 81.7%         | 72.5%         | 59.5%         | 59.5%         | 44.5%         | 27.7%         |  |  |  |  |  |  |  |
| Southern Coast   | 62.8%         | 49.3%         | 49.3%         | 49.3%         | 35.1%         | 35.1%         |  |  |  |  |  |  |  |
| Northern Coast   | 75.3%         | 64.4%         | 64.4%         | 64.4%         | 51.3%         | 37.2%         |  |  |  |  |  |  |  |
| Fcst.  | Daily Min.    | DFM (100      | O-Hr) Pctl.   | for FDRAs     | in North (    | Carolina      |  |  |  |  |  |  |  |
| FDRA   | Fri<br>Dec 12 | Sat<br>Dec 13 | Sun<br>Dec 14 | Mon<br>Dec 15 | Tue<br>Dec 16 | Wed<br>Dec 17 |  |  |  |  |  |  |  |
| Southern Highlands   | 82.0%         | 82.0%         | 82.0%         | 69.0%         | 69.0%         | 69.0%         |  |  |  |  |  |  |  |
| Central Mountains  | 57.0%         | 57.0%         | 40.1%         | 40.1%         | 40.1%         | 40.1%         |  |  |  |  |  |  |  |
| Northern Highlands   | 63.5%         | 63.5%         | 48.5%         | 48.5%         | 48.5%         | 63.5%         |  |  |  |  |  |  |  |
| Blue Ridge   | 65.5%         | 65.5%         | 51.2%         | 51.2%         | 51.2%         | 51.2%         |  |  |  |  |  |  |  |
| Western Piedmont   | 65.2%         | 65.2%         | 65.2%         | 50.0%         | 50.0%         | 50.0%         |  |  |  |  |  |  |  |
| Sandhills  | 78.3%         | 78.3%         | 65.8%         | 65.8%         | 65.8%         | 65.8%         |  |  |  |  |  |  |  |
| Eastern Piedmont   | 68.0%         | 68.0%         | 68.0%         | 68.0%         | 49.6%         | 49.6%         |  |  |  |  |  |  |  |
| Southern Coast   | 91.4%         | 80.5%         | 80.5%         | 67.5%         | 67.5%         | 67.5%         |  |  |  |  |  |  |  |
| Countill Count   | CONTRACT.     |               |               | 0,.0.3        | 0,,,,,        | 0,.0.0        |  |  |  |  |  |  |  |

# Overal

- December fire activity and difficulty of control tends to be moderated by lower max daily temps, shorter
  day length, generally better recoveries, and less robust mixing. The tendency this December has been for
  both lower fire activity and reduced difficulty of control through early month (there are outliers).
- However, even with lower KBDI values & higher duff/soil moisture surface fire will remain a concern with fluffy hardwood litter + interaction with Helene (or other storm/insect damage areas) footprint issues.
- Widespread/Impactful snow has not occurred at this point in the season. Pockets of state now at 42+ days since a ½" + rainfall event. (Slides 5-6)
- Warming and drying trend more pronounced as we move towards January for NC. Recent drought improvement for some spots in shorter-term but deeper dryness remains, remaining a significant concern for Spring 2026. Note stream flow slide.
- A reminder colder air temperatures can initially moderate impacts of very dry air and resulting dry fine fuels, however warming conditions that align with already critically dry fine & medium sized dead fuels can lead to extended burning periods and greatly enhance difficulty of control.
- Careful monitoring of post-burn prescribed fire units & wildfire footprints that overlap with abnormal dryness/low soil moisture will be crucial as we move through "dormant burn season", especially if dry conditions stay entrenched. Note the fire detects in Georgia today (right).

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- FEMS utilizes gridded forecast **models** to produce daily NFDRS forecasts therefore they are subject to significant change (especially farther out in time), which directly impacts daily NFDRS estimates. Actual observed daily NFDRS max/min outputs can differ significantly from forecasted values as a result.
- Work continues relating to FWIP content updates as we progress with FEMS. More information about FEMS, including transition notes, can be found <a href="here">here</a>.
- Interim Adjective Rating values are utilizing FM-Z ERC, binned into five categories.
- FM-Z contains roughly an even split between 1's, 10's, 100's and 1000-hr dead fuels, so picks up on both short/longer-term drying trends.



https://www.ospo.noaa.gov/products/land/hms.html#maps